TCS-4079-58
12 November 1958
Copy 2 of 3

Director, Photographic Intelligence
Center

Chief, Technical Intelligence Services Division

Control Extension and Geodetic Problems at CIA/PIC

1. Since early in the Aquatone/Chalice program, as you well know, PIC has been faced with the necessity to determine very accurate measurements from the photographic product. To this end, precise instrumentation, coupled with rigorous photogrammetric analysis, have been employed. As this approach has developed, the progress by PIC in this field has been followed by the services. Since the services have additional responsibilities for the production of cartographic material and geodetic information, there naturally developed a strong need and desire to apply such photogrammetric techniques to this problem. Much of the data necessary for accurate intelligence analysis of photography are similarly required for the cartographic and geodetic applications. For example, camera calibration and distortion values, accurate flying altitudes, camera tilt and inter-locking camera angles, all of which have been used by PIC, are also fundamental elements in the problem of control extension, which is the first step toward the determination of target positions in areas of scanty or no ground information.

2. PIC, through its Technical Intelligence Services Division, has participated in efforts to ascertain the value of Chalice photography for the purposes of determining target position. The first phase of this program has already been undertaken at PIC/TISD. Since both the Army Map Service and the Navy Hydrographic Office have shown keen interest in the results of the investigation, each organization has detailed two experts to PIC to work under the direction of TISD. This has been underway for almost two months. The Air Force, under the direction of Col. Alan Eldridge, AFCIN 3, has indicated a strong interest in the problem, but no effort has been made to participate in the PIC effort at present. However, the Air Force Aeronautical Chart and Information Center, St. Louis, has indicated a strong desire to cooperate in the problem. PIC has been under considerable pressure by ACIC in this field, to the extent of producing glass photographic plates for precise measuring machines now available at ACIC. Just recently, PIC has been

TCS-4079-58
12 November 1958
Copy 2 of 3

SUBJECT: Control Extension and Geodetic Problems at CIA/PIC

asked to furnish immediate aid in the form of personnel to ACIC at St. Louis for guidance purposes. This particular request has a somewhat desperate ring to it, and all possible advice has been furnished them by telephone. However, due to the urgent and pressing requirements of other recent and highest priority programs at PIC, personnel cannot be detailed to ACIC at this time.

3. PIC feels, as do AMS, HO, and ACIC, that the problem of determining target locations can be done successfully by proper use of Chalice photography. Also, PIC feels that there is an urgent need for such data. The procedures for production of such data are quite complex and require very careful analysis before the actual degree of accuracy of the result can be predicted. PIC/TISD has already accomplished a large portion of this work, but readily acknowledges that another large portion remains to be investigated, and has shared the results of PIC endeavor with the services concerned. However, it is felt that policy guidance is needed at this point to outline the course to be followed by PIC in the program, since the limited specialist personnel available at PIC are engaged in programs which preclude the devotion of any continuous pursuit for this problem.

4. The attached memo of 10 November 1958 outlines the current status of PIC/TISD work in this direction. Results of this effort are directly applicable to both PIC's photogrammetric analysis of photography and the services geodetic problems.

5. References: Memo for [redacted] 21 November 1957, Subject: Photogrammetric Control Ranges. 25X1A

25X1A Memo for Chief, HTA, 20 February 1958 ([redacted]24582) Subject: Problems in Metrical Analysis of Aquatone Camera Photography.

Memo for Project Director, 25 April 1958, (TCS-3083-58) Subject: Use of Talent Bases or Materials for Geodetic Control Purposes.

Memo for Project Director, 25 April 1958 (TCS-3084-58) Subject: Military Response to HTA [illegible] Program

TCS-4079-58
12 November 1958
Copy 2 of 3

SUBJECT: Control Extension and Geodetic Problems at CIA/PIC

25X1A

Memo for [redacted] 20 May 1958 (TCS-3097-58) Subject: Comments on TCS-3148-58, USAF Memo SKO272-8, Subject: Extension of Talent Control System to USAF Aeronautical Chart and Information Center, Received CIA 7 May 1958.

Memo for DD/I, 28 August 1958 (TCS-3597-58) Subject: The Determination of Geodetic Data from Talent Material.

Memo for Col. [redacted] 28 August 25X1A
1958, Subject: Tracker Camera Mode.

[redacted] 25X1A

Attach: TCS 3323-58

CLASSIFICATION

COVER SHEET ONLY

TALENT

"THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE LAWS, TITLE 18, USCA, SECS. 793 & 794, THE TRANSMISSION OR REVELATION OF WHICH IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW"

HANDLE BY TALENT CONTROL CHANNELS ONLY

(CONFIDENTIAL)

CLASSIFICATION

ATTACH. B